

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-20 are pending in this case. Claims 1-17 are amended by the present amendment without the introduction of any new matter. .

The outstanding Official Action includes a rejection of Claims 1, 2, 6, 7, 11, 12, and 16-20 under 35 U.S.C. §103(a) as being unpatentable over Harrell (U.S. Patent No. 5,457,779) in view of Venable (U.S. Patent No. 6,705,456), a rejection of Claims 3, 4, 8, 9, 13, and 14 under 35 U.S.C. §103(a) as unpatentable over Harrell in view of Venable in further view of Manning (U.S. Patent No. 5,729,503), and a rejection of Claims 5, 10 and 15 under 35 U.S.C. §103(a) as unpatentable over Harrell in view of Venable and further in view of Yamagami et al. (U.S. Patent No. 6,229,954).

The rejection of Claims 1, 2, 6, 7, 11, 12, and 16-20 under 35 U.S.C. §103(a) as being unpatentable over Harrell in view of Venable is traversed.

As noted in the last response, Harrell discloses an apparatus for simulating an artificial environment. This simulation is accomplished using a graphics processor that can “create a visual rendition of a true surface when passed a computerized model for that surface computer image system” as noted at col. 1, lines 19-22. Everything is based upon an approximation in terms of having “[t]he surface model or data that represents the visual rendition approximates the true mathematical equations for the true surface” (col. 1, lines 22-24). The surfaces are computed by software approximations to the true surfaces using geometric primitives as noted at col. 1, lines 27-33. Typically, the true surfaces are broken down into models that approximate the true surface that are composed of geometric graphic primitives, such as triangles and quadrilaterals, that are then rendered on a display screen as discussed at col. 1, lines 35-42. This is consistent with typical graphics processors that are

used for computer animation as described in the attached “How 3-D Graphics Work” article by Curt Franklin. Note in particular the description of how the graphics processor operates to use geometric primitives to simulate real 3-dimensional bodies beginning under the heading “How to Make It Look Like the Real Thing” on the attached page 3 of 15.

Harrell notes various techniques used to “render the primitive” that use various processors at col. 2, lines 21-30 and the use of triangle primitives to create display pixel patterns called bit maps at col.4, lines 42-51, for example. Harrell then explains the intricate details of typical graphics processing used to render such a triangle type geometric primitive starting at col. 6, line 21. The improved apparatus disclosed by Harrell uses SIMD processing to efficiently and quickly display the approximated surfaces on a display screen by spreading the vertex data structure of geometric primitives across multiple memories that allows “much higher bandwidth access into the data structure for greater performance,” for example. See col. 10, lines 9-25 of Harrell.

Applicants respectfully submit that the artisan would, accordingly, understand that the Harrell disclosed SIMD processing is intertwined with the use of the disclosed graphic primitives and their associated processing to create simulations of 3-dimensional bodies, not to process images representing a scanned 2-dimensional original document, as required by independent Claims 1, 6, 11, and 16 or the processing associated with the scanned 2-dimensional original documents disclosed by Venable.

In this last regard, Venable teaches 2-dimensional documents and forming reproductions thereof based upon scanning these plural documents together on one platen, not a simulation of a 3-dimensional body with a surface formed by processing using geometric primitives as in Harrell. While col. 1, lines 5-11, Venable disclose that this scanning of several documents results in particular image processing to correct problems associated therewith, there is no reasonable suggestion here or elsewhere in Venable of using graphic

primitives to create simulated images like those of Harrell or of processing such non-existing primitives with SIMD type processing sections, means or steps. Clearly, there is no suggestion in either reference that would have reasonably led those of ordinary skill in the art to even attempt to modify either of their completely different approaches to image formulation based upon the teachings in the other reference.

In this regard, In re Rouffet, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) requires the PTO to “explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.” As discussed above, Harrell and Venable clearly address totally different approaches to image processing and are concerned with totally different problems that in no way suggest that these references have teachings that the artisan would have considered to be combinable in the first instance, much less combinable in a manner to be relevant to the invention of Claims 1, 6, 11, and 16.

The Rouffet decision includes the further court mandate that mere “identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention.” See 47 USPQ2d at 1457. Therefore the court emphasized that there could be no establishment of obviousness based on merely identifying individual claimed elements as being disclosed in the prior art without the critical demonstration of reasonable motivation as to a logical prior art based reason for combining the references. Note further In re Kotzab, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) stating that “a rejection cannot be predicated on the mere identification in [the prior art] of individual components of claimed limitations” and requiring that “particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.”

Moreover, the artisan would not have been led by the teachings and suggestions of either Harrell and/or Venable to use a scanner to create an image to be processed using the geometric graphic primitive SIMD type processor of Harrell as such a processor is taught to improve manipulation and calculation of these geometric primitives that have no relationship to scanned document images. To attempt to modify either reference by the incompatible teachings in the other would be to violate the basic operating principles of that reference and involve a complete redesign noted to dictate a finding of unobviousness in In re Ratti, 123 USPQ 349, 352 (CCPA 1959).

Claim 2, and Claims 17-20 are dependent from independent Claim 1, Claim 7 is dependent from independent Claim 6, and Claim 12 is dependent from independent Claim 11 which independent claims are respectfully submitted to be patentable for the above noted reasons. Thus, Claims 2, 7, 12, and 17-20 are also believed to be patentable for these reasons as well as for the reason that the added subject matter thereof is not taught or suggested by Harrell and/or Venable taken alone or together in any proper combination.

Applicants respectfully traverse the rejection of Claims 3, 4, 8, 9, 13, and 14 under 35 U.S.C. §103(a) as unpatentable over Harrell in view of Venable in further view of Manning. because Claims 3 and 4 depend from Claim 1, Claims 7 and 8 depend from Claim 6 and Claims 13 and 14 depend from Claim 11 and because Manning does not cure the above noted deficiencies of the primary combination of Harrell and Venable.

Applicants also believe that Claims 3, 4, 8, 9, 13, and 14 are allowable because they recite additional elements not taught or suggested by the applied references. For example, Claim 4 (similar language in Claims 9 and 14) recites, *inter alia*:

wherein said control register section is configured to control the memory controller section to read data redundantly from a single addressable memory location of said memory, in accordance with a control signal provided from outside, and to set a redundant readout transfer mode to configure the memory controller section to transfer the redundantly read data to said

arithmetic processing section, such that a plurality of processing elements in said arithmetic processing section receive the redundantly read data from a single addressable memory location.

Manning, on the other hand, discloses a memory device arranged to perform high speed burst access read and write cycles. See Manning at column 2, line 53 to column 3, line 23. Manning also teaches that the disclosed memory device may be used in combination with a fast SRAM cache to provide fast access to a main memory in the event of a cache miss. See Manning at column 11, lines 60-64. The outstanding Office Action cited Manning as suggesting redundant memory access because Fig. 8 of Manning teaches reading data from memory 124 and from cache 132 into a single processing element. However, Claims 4, 9, and 14 require that data is redundantly read from a single addressable memory location and transferred to elements of the arithmetic processing section, as shown in Figure 12. Accordingly, it is respectfully submitted that Manning does not teach or suggest reading the same data from a single addressable memory location as memory 124 and cache 132 are not reasonably read as being a single addressable memory location. Thus, applicants respectfully submit that Claims 4, 9, and 14 clearly define patentably over the applied references.

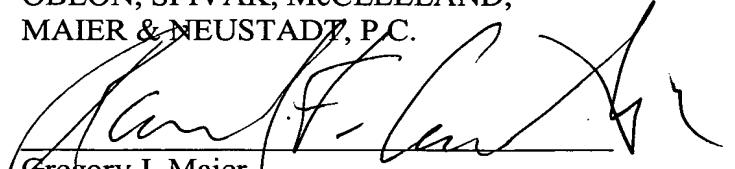
Applicants respectfully traverse the rejection of Claims 5, 10 and 15 under 35 U.S.C. §103(a) as unpatentable over Harrell in view of Venable and further in view of Yamagami because Claim 5 depends from Claim 1, Claim 10 depends from Claim 6, and Claims 15 depends from Claim 11 and because Yamagami does not cure the above noted deficiencies of the primary combination of Harrell and Venable.

Applicants further respectfully traverse the rejection of Claims 5, 10 and 15 under 35 U.S.C. §103(a) as unpatentable over Harrell in view of Venable and further in view of Yamagami because Claims 5, 10, and 15 recite additional elements not taught or suggested by the applied references.

Accordingly, the outstanding rejections are traversed and the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Raymond F. Cardillo, Jr.
Registration No. 40,440

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/03)

I:\ATTY\ET\201392US\201392US-AMD1.DOC